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**MILITARY AFFAIRS**

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CRITIQUE OF U. S., CHINESE APOLOGISTS FOR ARMS RACE

Moscow NOVAYA I NOVEYSHAYA ISTORIYA in Russian No 4, Jul-Aug 80 signed to press 26 Jun 80 pp 3-22

[Article by N. I. Lebedev and S. V. Kortunov: "The Problem of Disarmament and the Ideological Struggle - Critique of the Apologists for the Arms Race"]

[Text] The Soviet Union, the other countries of the socialist community, and all peace-loving forces constantly and persistently present constructive proposals for cessation of the arms race, disarmament, and insuring security, which would be based on political cooperation and bolstering trust in relations among states. With a realistic assessment of the devastating consequences of world thermonuclear conflict, the most sober-minded representatives of the ruling circles of various capitalist countries are gradually coming to understand that there is no alternative to peaceful coexistence by states belonging to different social systems.

An important milepost in the development of the positive processes occurring in the contemporary world community was completion of the second phase of negotiations on limitation of strategic offensive weapons and the signing of the SALT-II Treaty in June 1979. This treaty not only creates an effective system of measures to limit and reduce strategic weapons, but also offers prospects for reaching a new agreement.

The peace initiatives and proposals formulated by General Secretary of the CPSU Central Committee and Chairman of the Presidium of the USSR Supreme Soviet L. I. Brezhnev in his talk at the anniversary meeting devoted to the 30th anniversary of the formation of the German Democratic Republic are a significant contribution by the Soviet Union to the cause of stopping the arms race and achieving disarmament.

In his Berlin speech L. I. Brezhnev solemnly declared that the Soviet Union will never use nuclear weapons against countries that refuse to produce and buy them and do not have them in their territory. He stated

that the Soviet Union is ready to reduce the number of medium-range nuclear weapons in the western regions of the USSR today if NATO does not carry out its planned deployment of new medium-range missiles in Western Europe.

Guided by a sincere desire to finally bring the Vienna talks out of their stalemate, the Soviet Union, in agreement with the other countries of the Warsaw Pact, adopted a decision to unilaterally reduce the number of its forces in Central Europe and withdraw up to 20,000 Soviet servicemen, 1,000 tanks, and a certain amount of other military equipment from East Germany. The peoples of many different countries greeted these initiatives, which are exceptionally important for strengthening peace and security in Europe and throughout the world, with enthusiasm and hope.<sup>1</sup>

The struggle of the Soviet Union and other countries of the socialist community for international detente, to reduce the levels of the military standoff between the NATO countries and the defensive Warsaw Pact, and for disarmament has recently, however, run up against a powerful counteroffensive by the most aggressive, militaristic circles of imperialist reaction. The decision of the NATO Council to deploy new medium-range American nuclear missiles in Western Europe, the implementation of long-range programs of the North Atlantic bloc to modernize and build up their armed forces and armaments, the formation of the 100,000-strong "rapid response corps" in the United States, and the new five-year military program developed by the administration in Washington are all evidence that international imperialism is setting off a new, unprecedented in scope, round of the arms race. "It has already been clear for some time," L. I. Brezhnev emphasized in his responses to questions by a correspondent of the newspaper PRAVDA, "that the leading figures of the United States and certain other NATO countries have adopted a line hostile to the cause of detente, a line of stepping up the arms race, which intensifies the danger of war."<sup>2</sup>

In an attempt to give an ideological substantiation for the acceleration of military preparations, imperialist propaganda has recently launched various pseudoscientific notions with which it tries to instill the idea that militarism is "foreordained," "inevitable," and supposedly "useful" and that any steps toward disarmament are "pointless" and even "harmful." The problem of disarmament thus becomes a sphere of bitter ideological struggle.

The propaganda barrage of militaristic ideas launched by the reactionary Western and Chinese press in the late 1970's and linked above all with the development of a series of new military problems in the United States and the other NATO countries, makes it particularly pressing to expose their bankruptcy and the enormous harm which they do to the cause of peace and international detente. Soviet historical science has the important challenge of "taking apart all those sophistries which

are used today to justify war, and to do so in the greatest detail," because these sophistries are "the principal means of involving the masses of common people in war."<sup>3</sup>

1

The chief argument of the apologists for the arms race is their allegation of a supposed "Soviet military threat." "This theme," as L. I. Brezhnev has pointed out, "is used when it is necessary to put through a higher military budget and curtail expenditures for social needs, when new types of deadly weapons are being developed, and when they are trying to justify the military activism of NATO."<sup>4</sup>

The myth of the "Soviet threat," which was formulated by anticommunists as early as 1917, began to be propagated with special intensity in the West by the enemies of the process of international detente at exactly the time when the world had come face to face with the problem of disarmament. The point is that the process of political detente exercised a profound influence on the mood of public opinion, led to the growth of optimistic expectations, and forced political figures in the West to resort to negotiations with the Soviet Union and normalization of the international situation and controlling the arms race. Evidence of this is the book "Can America Win the Next War?" by NEW YORK TIMES military observer D. Middleton. In the book the author shows his distress that the desire of people to believe in detente with the Soviet Union and the improvement in Soviet-American relations have engendered complacency in broad layers of American society.<sup>5</sup>

Thus, it is not a supposed "Soviet threat," but rather a change in the political climate in the Western countries and the undermining of the position of those circles that do not want to develop political detente and supplement it with military detente which explain the growing activism of the supporters of a return to the "cold war." This is why the NATO politicians and military figures cry out about the "Soviet military threat" and vow to reject any steps toward a reduction in arms. In the recently published book "No Soft Options," English Admiral P. Hill-Norton, referring to the "constant threat from the East," calls for one response: politics from a "position of strength" and building up the armed forces of the North Atlantic bloc.<sup>6</sup> The supporters of the arms race also use references to the "Soviet military threat" to substantiate the new five-year program of substantial build-up of armed forces and armaments adopted by J. Carter and the decision of the NATO Council to deploy new medium-range American nuclear missiles in Western Europe. In the latter case propagandists are using the so-called theory of "two equilibriums." The essential point of the theory is the statement that while on the global level, in the area of intercontinental strategic weapons, parity has developed between the USSR and the United States, on the European continent, in the area of medium-range stationary nuclear weapons, the "balance" is supposedly in favor of the Soviet Union. But with the deployment of Pershing-2 missiles and cruise

missiles in Western Europe, according to the heralds of the policy of building up arms, the American "nuclear guarantee" will be strengthened, the desired balance will be restored, and Europe will be able to counter the "military threat from the East." The American "hawks," campaigning vigorously against ratification of the SALT-II treaty, argue along the same lines. In their opinion, the treaty "perpetuates U. S. weakness" and enlarges the "Soviet threat." They try to represent the treaty as a kind of inordinate "concession" to the USSR, which would supposedly allow it to achieve "military superiority over the United States" in the future. The statements of the "hawks" are filled with terrifying predictions concerning the "unrestrained growth of the threat from the East" which will ensue if SALT-II goes into force.<sup>7</sup>

The adherents of the myth of the "Soviet threat" usually employ various types of fabrications that distort the foreign policy of the Soviet Union and the defensive measures which our country is forced to take given the arms race that is stirred up by the imperialist countries. Some of them give information that is so distorted that, as G. Kennan, the American scholar who was a prominent diplomat in the past, has correctly observed, "One cannot help being surprised that such statements should come from responsible circles."<sup>8</sup>

This refers above all to the biased selection of numerical data on the supposedly "unrestrained growth" of military expenditures in the USSR. For example, American General A. Haig, former commander in chief of NATO Unified Armed Forces in Europe, states categorically that the Soviet Union "steadily increased its military spending 3-5 percent a year" through the 1970's. At the present time, the general says for purposes of intimidation, the world is witnessing "unprecedented growth in Soviet military potential."<sup>9</sup> J. Ericson, a professor at Edinburgh University, states that the USSR "spends roughly 50 percent more than the United States for military needs."<sup>10</sup>

If we look at official statistics, however, the falsification of the true situation by Western propaganda becomes obvious. Beginning in 1970 the Soviet Union has systematically reduced military appropriations. Thus, in 1970 military spending was 17.8 billion rubles, whereas for the state budget recently ratified by the USSR Supreme Soviet it will be 17.1 billion rubles in 1980.<sup>11</sup> During this time the share of military spending in the budget of the USSR has dropped from 11.5 to six percent. The advantages of the socialist economic system allow the Soviet Union to have high defense capacity and maintain armed forces at the necessary level with relatively lower military spending than in the capitalist countries.

While raising a provocative hullabaloo about the "unrestrained growth of Soviet military spending" NATO propaganda constantly refers to the United States as "lagging behind" the USSR in this or that particular area of armed forces and arms.<sup>12</sup> They always resort to this technique when it is necessary to unfold the latest program of armaments, new

weapons systems, and new types of weapons and spur on the arms race. Thus they once organized a sensational campaign concerning the "United States' dangerous lag in bomber aviation." As a result the military monopolies received capital to carry out a program to develop heavy American bombers, first the B-47 and then the B-52 intercontinental bomber armed with strategic nuclear weapons. But just a few years later it was frankly admitted that "the bomber lag was a myth."<sup>13</sup> A similar operation was carried out later under the pretext of an American "lag in missiles." Again it was demanded that the military budget be increased by many billions of dollars.

In the 1960's the American "hawks" launched a new version with the claim that the Soviet Union was carrying out a vast program of measures in the civil defense field which would supposedly inspire it to deliver a first strike against the United States and that various missile defense systems had been deployed around Moscow which would make a retaliatory strike by the United States ineffective "in case of an attack by the USSR." And although this fabrication was refuted by American politicians themselves, it was nonetheless the decisive factor in supporting the decision to develop the new MIRV missile system in the United States.<sup>14</sup>

The proposition that the Western countries are "swiftly falling behind" has been exploited with special intensity recently in connection with NATO's desire to undertake a new round of the arms race. In the West today it is being said that the Soviet Union has "superiority" over the United States in both strategic forces and nonnuclear weapons. It is alleged, for example, that the Soviet Union has an advantage in number of missiles and in their potential, that the Soviet ground forces outnumber the Americans three-to-one and have many more tanks, armored personnel carriers, and artillery guns; and that the Soviet Union is producing more tactical airplanes and helicopters and has overtaken the United States in the construction of surface ships and submarines.<sup>15</sup>

The purpose of these statements is clear. As G. Kennan observes, they are used to push enormous military budgets through Congress and to get ratification of various new arms programs such as the program for the MX mobile ballistic missile, the new B-1 strategic bomber, the Trident submarine, the cruise missile, the XM-1 tank, and others.<sup>16</sup> The entire history of the Soviet Union shows that it has never threatened anyone and has never attacked anyone. When the Soviet Republic was formed on 7 November 1917, it had no armed forces of its own. The Tsarist Army was in disarray at that time, and the Red Army began to be formed only after counterrevolutionary bands and foreign interventionists armed to the teeth reached the gates of Petrograd. For several years the Red Army was forced to repel the attacks of the unified forces of the interventionists.

Scarcely more than 20 years had passed since the end of World War I when fascist Germany, the main striking force of international

imperialism, attacked the Soviet Union. In 1949 the United States and ruling circles in the Western European countries, taking advantage of the "cold war" they had unleashed and building up war psychosis, formed the aggressive NATO military alliance, directed against the Soviet Union and the other socialist countries. Only six years later, when attempts to form an all-European security system had failed through the fault of the Western powers, did the socialist countries join together in the defensive Warsaw Pact Organization.

Other facts are also well known. According to the figures of the American Brookings Institute, the United States and the other NATO countries used their armed forces for political and military purposes 215 times between 1946 and 1975.<sup>17</sup> On some occasions these actions led to protracted and bloody wars. The states of the Warsaw Pact did not wage one day of war. During this time the United States put its nuclear forces in a state of full combat readiness 33 times and at least 19 times directly or indirectly threatened the socialist countries with nuclear weapons. During these same years the Soviet Union introduced roughly 60 proposals relating to the issues of peace and international security. It is the United States, not the USSR, which has attempted throughout the postwar period to develop the "ultimate weapon," with which the imperialists had hoped to achieve military superiority over the socialist countries and impose their will on them.

Therefore, the true source of the constant threat of war is the United States. As for the fabrications of bourgeois propaganda concerning the "Soviet threat," as L. I. Brezhnev emphasized, this is a "monstrous lie from start to finish."<sup>18</sup> "We must not frighten ourselves with fabricated threats, but rather discuss the problems and potential that now exist in a business-like, constructive manner."<sup>19</sup>

The enemies of peace and detente are now trying to take advantage of the events in Afghanistan, depicting the aid given by the Soviet Union to this country in repulsing imperialist aggression from abroad as a "threat to peace." Using these events as a pretext, the U. S. Government has taken a number of steps to intensify the arms race, including the nuclear arms race. The White House has indefinitely postponed consideration of the issue of ratification of the SALT-II treaty by the U. S. Senate. A decision has been made to form what are called "rapid response forces"; this represents preparation for aggressive, interventionist actions in various parts of the globe.

Needless to say, the Soviet Union is not carrying on any kind of "intervention" or "aggression" in Afghanistan. At the request of the Government of Afghanistan and in conformity with a Soviet-Afghan treaty and Article 51 of the U. N. Charter, the USSR is helping this country defend its liberty and independence against aggressive actions by American imperialism and the Beijing hegemonists. The events in Afghanistan are not the true cause of the current aggravation of the international situation. If there were no Afghanistan, militaristic

circles in the United States and NATO would certainly find another pretext to aggravate the world situation and give the arms race new impetus.

The administration of President J. Carter, as THE NEW YORK TIMES observed, is now rounding out a change in U. S. foreign policy whose outlines have been discernible for some time. It is following a policy of refusing to negotiate on arms limitations. Carter ordered the American Arms Control and Disarmament Agency to cease its efforts to "turn swords into plowshares" and instructed that everyone involved with arms control issues postpone all initiatives in this field.<sup>21</sup>

It is common knowledge that long before the events in Afghanistan the White House had in fact become opposed to conducting negotiations in the field of arms limitation, and for this reason the negotiations produced no results and Washington essentially torpedoed some of them, in particular negotiations concerned with the Indian Ocean.

L. I. Brezhnev described the actions of the American administration in connection with the events in Afghanistan as a poorly thought-out attempt to take advantage of these events to block international efforts to reduce the danger of war, strength and peace, and limit the arms race. "The unilateral steps taken by the United States represent serious policy mistakes. Like a boomerang, tomorrow if not today, they will return to strike those who launched them."<sup>21</sup>

2

The conception of preserving peace on the basis of "equilibrium of fear" or "balance of terror" occupies an important place in the arsenal of the enemies of disarmament. In the logic of those who preach it, peace and security can only be gained if potential enemies are mutually deterred by the threat of self-extinction. According to the reactionary West German scholar K. Menert, wars have not occurred between the two opposed blocs not because the human race is peace-minded, but rather because the thought of the consequences of such wars terrifies everyone who could unleash them and overcomes their readiness to press the buttons and pull the levers. It will continue this way as long as the "equilibrium of fear" lasts.<sup>22</sup> Z. Brzezinski, national security advisor to the U. S. President, holds similar views. "The existence of weapons of total devastation," he wrote, "makes the consequences of a conflict incalculable and thus reduces the probability of a major war."<sup>23</sup>

Accepting this proposition as an axiom, bourgeois ideologists draw the conclusion that it is necessary not only to perpetuate the "balance of terror" because, they think, any attempt to disturb it by disarmament would probably lead to war, but also to continuously build up military might at both poles. The accumulation of weapons, they say, plays a supposedly positive, stabilizing role because it provides a more and more "reliable" guarantee that these weapons will never be used in practice.

When the issue is formulated in that way, the arms race changes from bad to good; it acquires the role of guaranteeing preservation of the peace.

The supporters of the conception of the "balance of terror" try to depict themselves as peace-loving, although their writings are directed at undermining detente and expected to substantiate continuation of the arms race in the interests of the military-industrial complex.

The bourgeois ideologists and politicians say that the "equilibrium of fear" has been a main reason for international detente. If the world wants to continue detente, they argue, it is necessary to strengthen the "equilibrium of fear," the "mutual deterrence." West German author Von Raven writes: "Deterrence is not the opposite of detente, but rather its prerequisite. If in the striving for detente deterrence is rejected, this will only harm detente."<sup>24</sup> The same idea was expressed by West German political scientist H. Andren, who warned against steps toward reducing arms. Detente between the superpowers, he declares, is the "child of nuclear weapons and the balance of terror...and history has not yet answered whether it is necessary for the parents to be kept alive if the child is to survive."<sup>25</sup> In other words, there is no need to travel the path of disarmament for the sake of preserving and developing detente.

Ruling circles in the United States and the other NATO countries believe that the arms race is compatible with detente. Moreover, they think that only by building up strength will it be possible to follow a policy of co-existence with the socialist countries. "Those who say that America is over-armed and spends too much for defense," said former President of the United States G. Ford, "are deeply confused. Detente and national defense are interrelated."<sup>26</sup> In August 1975, having restated his desire to develop detente, he persistently called for building up U. S. military strength: "I will oppose any reductions in the military budget as firmly as I can, with all the means at my disposal."<sup>27</sup> "A strong defense," in his opinion, "is the most reliable path to peace. Strength makes detente feasible."<sup>28</sup> This approach has been inherited by the Carter Administration; U. S. military spending rose sharply in the late 1970's. "Constant American might," he said, "is the only possible foundation for the broader, truly mutual international detente which we are seeking in relations with the Soviet Union."<sup>29</sup>

What can be said about the essence of the idea of peace based on the "equilibrium of fear"? There is only one possible answer: peace cannot rest on the irrational foundation of mutual nuclear deterrence. Balancing on the brink of an all-devastating war has, by itself, the most devastating consequences for the moral atmosphere throughout the world and for human ethical values. "Fear of a nuclear war," the prominent English scholar D. Bernal wrote, "is an intolerable situation which is already having extremely serious social and psychological

consequences. Nothing has any value, nothing has the slightest meaning if everything can be swept away by nuclear war."<sup>30</sup>

But the chief flaw of "nuclear peace" is not so much the dangerous psychological atmosphere that it creates as it is the fact that it does not actually give any realistic guarantees of preventing another world war. The supporters of the idea of "mutual deterrence" propose that we put our trust in a belief that, faced with the threat of mutual extermination, potential enemies will show restraint.

Historical experience shows, however, that it is not enough to rely just on common sense and weighing events from the standpoint of formal logic when international problems, especially problems of war and peace, are being decided. Some time ago the famous German military theoretician K. Clausewitz remarked that war and the preparations associated with it are based on "a game of possibilities and probabilities, happiness and unhappiness, among which the sequence of strict logical reasoning frequently disappears; logic in general proves helpless and a useless mental tool."<sup>31</sup> It is true that the most flawless logical arguments have led to mistakes. Let us look at historical examples. More than 100 years ago Alfred Nobel, the inventor of dynamite, stated that he saw a "great hope for peace" in the new weapon.<sup>32</sup> In his opinion, the consequences of using dynamite would be so terrifying that the very idea of them would logically drive politicians to conclude that war was impossible. But what happened? Did wars stop for this reason? Did peace become stronger? Of course, it did not. The discovery of dynamite, like the discovery of the machine gun, the tank, the airplane, and poison gases, not only failed to put an end to war, but on the contrary made them even more destructive.

It is widely known that just before World War I, in November 1912, W. Churchill said: "The world will say that a generation which permitted such a war to occur was a generation of madmen." On the other side of the English Channel at the same time French Prime Minister R. Poincare was also saying, "A war occurring now would be a challenge thrown down to common sense, the human race, civilization."<sup>33</sup> Nonetheless, two years later the imperialist powers thrust the world into an insane catastrophe, and among the organizers were W. Churchill and R. Poincare.

As long as capitalism exists, there also exists a source of military danger and the threat of war cannot be completely eliminated. The history of the world has confirmed this statement many times. Therefore, the lofty talk of bourgeois ideologists to the effect that the appearance of extraordinarily destructive weapons can by itself eliminate global warfare is inflammatory.

Arguments that the arms race plays a "peacemaking" role are equally bankrupt. The American author P. Crosser, speaking of the consequences of the arms race, writes: "A situation may be created where

The mechanism of this regulation has been described by the American economists C. Hitch and R. Markin in their book "The Military Economy in the Nuclear Age." They believe that military spending not only "diminishes the likelihood of a decline in general demand," but also "promotes the taking of other anti-inflationary measures," for example the "injection" of additional money into the economy. "The military program," they state, "acts as a kind of circuit breaker against crises."<sup>19</sup>

In recent years a whole school of Western political scientists had appeared which "blazed" the rapid obsolescence of arms because it supposedly promotes the "exceptionally humane function of the user of military output" which "would otherwise have to be performed by war." Pricing the "beneficial impact" of obsolescence, Lockheed vice president L. Rutherford states: "We discard our automobiles long before they stop running, and our economy would crumble if we did not do so. Our missile program performs a similar function brilliantly. We send up missiles and they never return, so therefore we are constantly building new missiles. This is wonderful! This creates jobs and insures monetary circulation."<sup>20</sup>

A fairly large group of apologists for militarism argue from the viewpoint of military commodity fetishism. In their attempt to substantiate the supposedly favorable impact of the arms race on the economy, the bourgeois thinkers are trying to convince the working people that it is economically advantageous and thus to justify the increase in military spending to them. The advocates of continuation of the arms race made extensive use of the economic crisis of 1974-1975, frightening public opinion with the specter of unemployment and a drop in the standard of living to oppose any steps toward reducing arms. In early 1975 the journal NATO'S FIFTEEN NATIONS claimed that "many workers will lose their jobs" as the result of a small reduction in armed forces announced by the Labor Government.<sup>21</sup>

For all their absurdity, such views have a certain influence on certain strata in the Western countries. Nor is this surprising, because the prospect of being without a job is the most terrifying threat for working people in a capitalist society. Massive ideological conditioning and the fear of unemployment and inflation often lead to a situation where some workers and employees at military enterprises demonstrate a concern for maintaining a high level of military spending and support continuation of the arms race.<sup>22</sup>

But what is the real effect of militarization of an economy on the development of productive forces? Is an increase in armament really a panacea against crises and inflationary processes? Does an increase in military spending in fact lead automatically to solving the problem of unemployment?

The history of the postwar decades has shown that militarism has economic repercussions that cancel out the temporary effect of "revitalization" of the market situation. While it stimulates an overall growth

in production for a short time, the arms race ultimately has a negative effect on capitalist reproduction, undermining its foundation, and slows down the development of the overall economic potential of the particular country.

This is graphically demonstrated by a comparison of the rates of growth of industrial production of militaristic countries with those having smaller military budgets, in particular a comparison between the United States and Japan. In the three postwar decades U. S. military spending has been 11-12 percent of gross social product. During this same time in Japan the figure was roughly one percent. The average annual growth rate of industrial production in the United States for 1956-1975 was less than one-third of the rate in Japan.<sup>43</sup> The U. S. share of industrial production in the capitalist countries dropped from 54.6 to 39.2 percent in the period 1948-1974 while Japan's share increased from 1.2 to 9.2 percent.<sup>44</sup> And although militarism itself is not the only cause of this situation, it has nonetheless played an important part.

The example of West Germany is instructive. Its economy developed rapidly in the 1950's and early 1960's, that is, when military spending was still fairly low. It was in these years that the rate of economic growth in West Germany rose, and this made it possible for the country to overtake its capitalist partners for many indicators. However, as military spending increased the economic growth rate of West Germany slowed down.

Thus, life itself refutes military commodity fetishism. Military spending has not become the determining factor in economic growth in any Western country. On the contrary, higher rates of economic development have generally been observed in those capitalist countries where military spending was comparatively low. Even bourgeois specialists have been reaching this conclusion recently. For example, American professor C. Bowlding emphasizes that "the U. S. Department of Defense is causing great economic harm to the country. It is reducing domestic consumption by roughly 15 percent and decreasing the rate of economic growth, probably, by two percent a year."<sup>45</sup>

The history of the postwar decades has also demonstrated the bankruptcy of statements by bourgeois ideologists to the effect that the arms race has been a means of averting crises. Of course, it cannot be denied that the military-economic preparations of the imperialist countries, which have reached enormous scale, have a certain impact on the course of capitalist reproduction. By regulating military orders the bourgeois state is able to postpone somewhat the beginning of a crisis or mitigate its development. But overall military spending cannot change the cyclical character of capitalist reproduction. Evidence of this is the economic crises which have occurred in the capitalist countries since the war, in particular the most severe and profound world economic crisis of 1974-1975.

Enormous military expenditures intensify currency-financial difficulties. The arms race and inflation are inseparable. Because of paper money emission to cover the state debt, the channels of circulation are overflowing with money, which leads to inflationary processes. As statistics show, in the first years after the war the growth rate of gross national product in the United States corresponded almost exactly to the rate of growth of money in circulation. But under conditions of the arms race of the 1960's and the war in Vietnam, the rate of increase in GNP was less than half that of monetary emissions.<sup>46</sup> "In our country," said American Senator Tydings, "military spending has undermined economic development, doubled the rate of inflation, and led to an unprecedented peacetime budget deficit."<sup>47</sup> In 1978 the debt of the U. S. federal government reached the astronomical figure of 786 billion dollars.<sup>48</sup>

The arms race has not brought the "absolute employment" promised by bourgeois economists or the "general prosperity and well-being." In 1974-1975 unemployment in the developed capitalist countries grew sharply, reaching a scale unprecedented in the last 40 years. The total number of completely unemployed persons in these countries reached more than 18 million in the fall of 1975.<sup>49</sup> Unemployment was particularly extensive in the United States. G. Hall, general secretary of the Communist Party of the United States, observed that the highest level of unemployment occurred in the "cities and states where military industry is predominant."<sup>50</sup>

Thus, the arms race is not ridding the capitalist countries of crises, unemployment, or other chronic problems. Moreover, it intensifies economic difficulties and retards the development of productive forces. Many works by bourgeois authors in the 1970's have emphasized the "factor of instability" created in the capitalist economy by high military budgets.<sup>51</sup> Such prominent American thinkers as J. Galbraith, A. Burns, E. Mansfield, S. Melman, and G. Kolko have begun criticizing the policy of continuing to increase military spending. In his book "The Superwarriors," D. Kanan writes that the U. S. administration figured to stimulate the economy by military spending and help overcome the recession, but these plans were cancelled out by inflation.<sup>52</sup>

Another American thinker S. Melman, in a book with the striking title "The Permanent War Economy. American Capitalism in Decline," wrote that militarization of the U. S. economy has turned out to be the opposite of what was expected: instead of a means of solving the problem of surplus capital and labor it has become a generator of surplus capital and labor, which finally led to growth in unemployment, an increase in the export of capital to foreign countries and a rise in prices within the country.<sup>53</sup> American historian G. Kolko holds similar opinions. "These surrogates," he writes, referring to militarization of the economy and the arms race, "are essential to maintain capitalism, but with the passage of time they have become increasingly dangerous,

first for the rest of the world, then for the American people also, and finally for the well-being and vitality of capitalism in the United States itself."<sup>54</sup>

We must consider one other way that the enemies of disarmament try to stop or slow down military detente. We are referring to taking advantage of the military-technical difficulties of restricting arms. Some Western specialists, referring to the asymmetry that exists in the military arsenals of the United States and the Soviet Union, NATO and the Warsaw Pact, conclude that it is impossible to compare the armaments of the opposing sides and, therefore, a balanced reduction in their military potential is also impossible.

In a recently published book D. Collins and A. Cordesman, specialist in strategic studies, write that a comprehensive comparison of military might is always no more than an approximation because there is no generally accepted "formula for comparison and compensation." Therefore, they state, strategic comparisons are not much use.<sup>55</sup> A comparison would only be possible in action, but even then it proves very crude because not even the most sophisticated games at the Pentagon allow a realistic reproduction of sufficiently large-scale simultaneous actions by ground forces and aviation with due regard for the principal differences in the tactics and structures of armed forces between particular NATO and Warsaw Pact countries.<sup>56</sup>

Collins elaborates the idea of disproportions in armaments and armed forces in another book, "American and Soviet Military Trends Since the Cuban Crisis."<sup>57</sup> American Senator G. McGovern, and English Admiral Hill-Norton also referred to the asymmetry in military arsenals as a supposed "obstacle to disarmament." Hill-Norton, for example, believes that only particular elements of the military balance today are subject to quantitative accounting and an attempt to compare the military arsenals of NATO and the Warsaw Pact as a whole is doomed to fail.<sup>58</sup>

The English researcher R. Haas, an associate of the International Institute of Strategic Studies, goes even further. He believes that in the age of scientific-technical revolution a quantitative comparison of armed forces and armaments, especially in the field of naval weapons, is completely impossible. It is unclear, he writes, whether disarmament talks should consider simply the total number of warships or must take account of the ability of the sides to send "nonnaval forces and systems" to the given region and whether the task of control should be to limit naval forces as a whole, naval forces in a particular region, or whether they should be evaluated by the contribution which they could make to the development of events in a broader military theater. It is his opinion that none of the traditional criteria such as total number, tonnage, or equipment can provide a complete and accurate picture.<sup>60</sup>

Whether desired or not, the dissemination of such ideas sows scepticism and lack of faith in the possibility of progress toward disarmament and objectively obstructs solving this vitally important problem. In reality, however, these ideas serve as a pretext for all kinds of delays in disarmament talks and make it difficult to reach concrete agreement. The West has often used the objective difficulties of comparing different forms of weapons for unjustifiably dragging out talks on limiting armed forces and armaments in Central Europe. American diplomacy has functioned in the same way during preparation of the SALT-II agreement.

There is no question that difficulties exist in comparing the military potential of the opposing parties, and they are significant difficulties. They arise from the revolution in science and technology occurring in our day, the greatest such revolution in human history. It leads to increasing complexity in all models of weapons and to rapid obsolescence. The scientific-technical revolution, which cannot develop in the same way in different countries, generates asymmetry in the military arsenals of the different sides. But is it possible, beginning from objectively existing difficulties in comparing military art, to conclude that a balanced reduction in armed forces and arms is "impossible"?

Of course, it is not. No matter what difficulties may exist in this area, with good will and mutual interest in the success of disarmament talks agreements can be reached on the basis of the principle of equality and equal security. The history of the disarmament talks shows that military-technical difficulties are not an insuperable barrier to the development, signing, and observance of such agreements. This is proven by many currently existing agreements in the sphere of disarmament.

The existing agreements also refute the arguments of those bourgeois political scientists who, taking advantage of military-technical difficulties in disarmament, recognize the need for disarmament in words but in fact try to prove that it is "impossible" for lack of means of effective international monitoring. This viewpoint is held, in particular, by the American writers S. Possony and J. Purnelle, who urge the United States "not to trust its security to so-called disarmament agreements to any extent" because the problem of reliable monitoring of compliance with disarmament agreements has not been solved.<sup>61</sup>

The authors of the monograph "The Dynamics of the Arms Race" take a similar position. The monograph states that 115 types of guarantees of international agreements have been used in history since 1815. But not one of them can be used as a means of effective international monitoring.<sup>62</sup>

The problem of finding effective measures of international and national monitoring has been discussed many times at such prestigious

international forums as the Pugwash conferences. The fifth conference adopted a statement which acknowledged the difficulty of monitoring compliance with disarmament agreements related to the fact that many types of weapons, for example biological and chemical weapons, can be produced at civilian enterprises. But this refers only to special, and by no means the principal lines of the arms race. Thanks to the development of science and technology, the main spheres of the arms race are entirely susceptible even to national monitoring equipment.

The question of monitoring remains one of the lines of attack by the American "hawks" on the SALT-II treaty. According to them, considering experience in compliance with agreements reached earlier, the Soviet Union cannot be trusted. "Only unscrupulous and irresponsible loud-mouths," A. A. Gromyko said, "could permit themselves to reproach the USSR for failure to fulfill obligations under the above-mentioned agreements with the United States. And this is done for a very definite purpose, to hinder negotiations, especially concerning further steps to limit strategic arms, and to harm Soviet-American relations in general."<sup>63</sup>

The opponents of SALT-II added one more argument to their arsenal in connection with the events in Iran. As a result of the revolution in Iran American bases from which the United States monitored Soviet territory had to be shut down.<sup>64</sup> Because it is impossible to check fulfillment of SALT-II obligations without them, they claim, the treaty should not be ratified.

This concern about the problem of monitoring is strange to say the least if we consider that official Washington documents recognize the possibility of "verification" of SALT. For example, in early 1978 the U. S. Department of State sent a report to Senator J. Sparkman, chairman of the Senate Foreign Relations Committee, which observed that "the SALT-II agreement can be properly checked. This conclusion is based on an evaluation of the possibility of monitoring both particular points of the agreement and the agreement as a whole."<sup>65</sup>

Prominent Western military observer P. Kramer writes about the existence of effective means of national monitoring in his article "Monitoring Compliance with the SALT-II Agreement."<sup>66</sup> He shows persuasively that with the tracking systems available in the national arsenals of the United States and the Soviet Union compliance with the SALT-II agreement can be monitored with almost 100-percent effectiveness.

Statements by respected bourgeois authors show that the arguments of the ideologists of the military-industrial complex to the effect that monitoring compliance with disarmament treaties is "impossible" are completely false, unfounded, and fabricated.

Despite the irrefutable facts, however, many bourgeois authors continue to cast doubt on the possibility of limiting the arms race. Some of them

say that all agreements on disarmament are useless because, in their opinion, the arms race will nonetheless outdo the course of negotiations. This idea is even expressed by G. Kennan in evaluating the prospects of the SALT negotiations. "Even the most favorable results which could be expected after the completion of these negotiations will hardly be sufficient," he writes. "The main reason is that the rate of improvement in military hardware is greater than the probable rate of any such negotiations. The technical possibilities under consideration when instructions for the two delegations are written up will already have changed to some extent by the time the talks are completed, and therefore any agreements reached will lag behind the development of events."<sup>67</sup>

Statements such as these cultivate distrust of disarmament negotiations among the masses of ordinary people and paralyze the struggle of the working people to limit the arms race. "The fact which we are witnessing today," H. Bertram, director of the London International Institute of Strategic Studies, exclaims tragically, "is the crisis of our ability to solve the problems of disarmament."<sup>68</sup>

It is obvious, however, that these possibilities depend decisively on the policies of the state, on the line which it follows in the world arena. The impasses in the way of solving the problem of disarmament do not arise by themselves, they are the result of the fact that the Western powers not only fail to show the proper interest in stopping the arms race but rather, by contrast, try in every way they can to stir it up even further.

In the disarmament talks Western diplomats use long-familiar techniques: they propose demands that they know are unacceptable to the socialist countries, that conflict with their security interests; they exaggerate the difficulties of monitoring; they tie specific disarmament questions to other political problems that have nothing in common with disarmament; finally, the talks are dragged out by technical debates that lead away from the essential subject. These kinds of actions unjustifiably lengthen disarmament talks and ultimately lead to a situation where when an agreement is to be signed the continuing process of improvement of military hardware in practice negates its effectiveness. But this result is the fruit of conscious activity by the leaders of the capitalist countries. Attempts to blame some kind of "fatal laws of the arms race" for it are unfounded.

Of course, practical implementation of disarmament is a truly difficult matter. However, bourgeois authors use every means to exaggerate the difficulties of solving the problem and to create the impression that the human race is impotent when faced with the arms race. Such actions do not help solve the problem of disarmament at all, they make it more difficult.

The actions of the ruling circles of the PRC aimed at aggravating the international situation are a major obstacle on the road to military detente and disarmament. Having made a truly fantastic turnaround in politics from ambitious claims to the role of leader of the world revolutionary process to an open counterrevolutionary conspiracy with the most diehard imperialist reactionaries in just two decades, the Beijing leaders have openly taken up the path of preparing for world thermo-nuclear war and an unprecedented arms race. This PRC policy was pre-determined by its position with respect to the issues of disarmament.

The Chinese leadership worked out a whole system of "theoretical" conceptions and doctrines to substantiate its military line. We refer here to the Maoist definition of the age, the conception of "three worlds," and the argument to the effect that detente is "illusory." However, the principal ideological doctrine, aimed at spurring on the arms race and involving the world's peoples in war, is the conception of the "inevitability" and "usefulness" of another world war. China today is virtually the only country in the world whose official circles publicly appear as apologists for world slaughter. "The third world war cannot be avoided," Deng Xiaoping argued in a talk with Japanese journalists on 21 July 1975. "It is possible that many people will die in this war. But this war will make it easier to solve the problems of the repressed peoples and of the human race. It is not so bad."<sup>69</sup> And at the 11th Congress of the CPC Hua Guofeng asserted that the outbreak of a world war "does not depend on people's will."<sup>70</sup>

In addition to the thesis of the "inevitability" of war the Chinese leadership tries to prove the necessity of war as good for the people. After the 11th Congress of the CPC propaganda intensified for the thesis that when war does break out, the peoples of the world will find themselves in an "advantageous," "favorable" position.<sup>71</sup> An article in RENMIN RIBAO on 1 November 1977 glorified the Maoist conception of "Three Worlds," asserting that nothing bad will happen if war breaks out because during the war "peoples of different countries in different parts of the world will have favorable opportunities to organize wars against aggression. And after prolonged, unified efforts the peoples of the world will finally destroy the instigators of war, the USSR and the United States." In other words, the great-power hegemonic goals of the Chinese leadership, whose objective is to create a great Chinese state on a nationalistic basis, will be accomplished by means of war.

After advancing the ridiculous thesis of the "inevitability" and even "desirability" of war, Beijing began unprecedented preparations for a worldwide conflict. Within the country militarization of the economy and all aspects of the life of Chinese society intensified on a scale which was not even imagined during the life of Mao Zedong. Day after day the propaganda apparatus of the Chinese leadership drives home to the Chinese people the idea of the necessity of preparing for

"tomorrow's war." "War is a contest of strength. If we prepare fully in advance, victory will be guaranteed," preaches the organ of the Military Council of the CPC Central Committee, the newspaper JIEFANGXUN BAO.<sup>72</sup>

The policy of the "four modernizations" which was widely proclaimed, has been entirely subordinated to military preparations. "Modernization of agriculture, industry, science, and technology is the foundation and prerequisite for modernizing state defense," the journal HONGCI emphasized.<sup>73</sup> In February-March 1978 the first session of the All-Chinese Assembly of National Representatives, fifth convocation, was held in Beijing. One of the basic problems posed by it was technical re-equipping of the army on the basis of formation of a modern military industry and using the latest advances of science and technology both in China and abroad. Chinese military circles are demanding that "we have everything that the enemy has, and things that the enemy does not have."<sup>74</sup>

Beijing shows no originality in finding arguments to support the arms race. As already mentioned above, reactionary imperialist circles, opposing the desire of peoples for disarmament and military detente, spread the idea that policy "from a position of strength" serves the cause of protecting peace and that militarization is, they say, essential to stimulate economic development and scientific-technical progress and to reduce unemployment. For its part, Beijing propaganda, in arguing for the militarization of China, asserts that "defense needs can stimulate development of the economy. With the development of military industry there will definitely be a steady stream of new demands made on all sectors of industry, science, and technology, thus promoting the development of the entire national economy and raising the level of science and technology."<sup>75</sup> All the resources of the Beijing ideological apparatus have been employed to substantiate the necessity of accelerated development of those industrial sectors which will promote the formation of a "powerful China," capable of waging modern warfare.

The negative attitude of Beijing toward problems of disarmament follows logically from the strategic policy of the PRC leadership with respect to total militarization of the entire life of the state, converting China into a mighty military power, and intensifying preparations for war.

Pursuing the goal of putting the PRC "outside the framework" of disarmament obligations, the Beijing leaders declare that it "must begin with disarmament of the two super powers." This is reinforced by the persistent efforts of Beijing to include itself in the "third world." According to their conception, the "third world" countries, the PRC included, should build up their armaments for the purpose of "strengthening defense capacity" at the same time as the "two super powers" will, in their view, be disarming.

At this point Beijing has not only failed to sign a single international agreement leading toward disarmament, but also has used every means to thwart all initiatives in this area. It opposes a ban on all means of mass destruction, whether nuclear, chemical, or bacteriological or new types and systems of weapons of mass destruction, and supports the arms race both for China and for the rest of the countries in the world. The essential point of the Chinese position is that as long as China has "very few nuclear weapons" it will not agree to any steps in the disarmament field. And China will, as its representatives to the United Nations openly declare, oppose all such steps for they can only interfere with its "development of its own nuclear potential."<sup>76</sup>

It is common knowledge that China opposes both all-encompassing and partial solutions to the complex problems of nuclear disarmament. The Chinese delegation calls for a global nuclear race from the platform of the United Nations. In his first speech at the 26th session of the U. N. General Assembly on problems of disarmament on 24 November 1971 the delegate from China declared that "in the absence of a complete ban on and complete destruction of nuclear weapons it is impossible to expect other countries, which are subject to the threats of the two nuclear powers, not to develop nuclear weapons for the purposes of self defense." As time went on China said more. From the next, 27th session of the U. N. General Assembly until the present day, employing the same fabricated pretext of a "threat by the two nuclear superpowers," the Chinese representative has called for the development of nuclear potential or "nuclear defense capacity" by those countries which have only a few nuclear weapons or none at all.<sup>77</sup>

In other words, the Beijing position is that as long as nuclear and non-nuclear powers are on different levels of development with respect to weapons of mass destruction, it is impossible to reach agreement on nuclear disarmament and that this subject can be discussed only when all states have accumulated equivalent nuclear arsenals and the non-nuclear states have created "their own defensive nuclear potential." But this is plainly ridiculous, because the nuclear weapons race could go on indefinitely with such an approach, with all the economic, political, and military consequences that would follow. Stability in international affairs with complete equality cannot be secured by continuing the race, which is what Beijing strives for by every means; it can be done by effective steps toward complete elimination of the nuclear arsenals of all states that possess them, as envisioned by the corresponding Soviet proposals and U. N. resolutions supported by a majority of United Nations members.

At a time when there is growing protest throughout the world against the dangerous decision of the NATO Council to deploy medium-range American nuclear missiles in Europe, the Chinese are announcing their full support. Such desires on the part of Beijing are understandable, for deployment of Pershing and cruise missiles on the European

continent should, in the thinking of the Beijing leaders, lead to an aggravation of relations between the Western European countries and the socialist community. This will intensify the danger of a military conflict in Western Europe, which is an old Beijing dream.

The Chinese newspapers regularly publish specially selected statements by advocates of the neutron bomb. In one of these selections RENMIN RIBAO explained that the neutron bomb is a "tactical" weapon and "not such a bad one."<sup>78</sup> It is typical that the Chinese newspapers did not publish a single report on the massive demonstration, the inquiries in parliaments, and statements by scientists and public figures against the neutron bomb and its deployment in several Western European countries. President Carter's decision, made under the pressure of public opinion, to postpone production of the neutron bomb was received negatively in China,<sup>79</sup> and the commentary that was made was flagrantly provocative: the latest U. S. concession has produced nothing, and only led to a strengthening of the USSR, which is demanding more concessions.<sup>80</sup>

Beijing's lack of interest in solving the problems of disarmament and its resistance to any, even partial steps toward limiting the arms race are dictated by the current domestic and foreign policy of the Chinese leadership. They are aware, however, that they will not be able to disregard solutions to the most pressing problems of the day so easily, and so they are trying to advance various preliminary conditions. Here is one of them.

At the 30th session of the U. N. General Assembly the PRC representative in the First Committee stated that "China is ready to stop its nuclear testing at any time, but this can only occur when the superpowers completely ban and completely destroy their nuclear weapons, not before."<sup>81</sup> This and similar statements by the Chinese leadership are nothing but an attempt to create Chinese nuclear superiority: the nuclear powers destroy their stockpiles of nuclear weapons, while Beijing only stops nuclear testing, while keeping its entire accumulated arsenal of weapons of mass destruction.

The unseemly maneuvers of Chinese representatives related to completely impractical, fabricated so-called preliminary conditions do not arise from a concern for advancing the cause of disarmament. Refusing to co-operate constructively in solving the problems of disarmament, China is carefully calculating how to complicate and delay the development of all measures and steps in this field.

Careful study of the PRC position on questions of disarmament and also of the arguments used by the Chinese leadership in support of their position on these issues confirms once again the conclusion of the CPSU that Beijing today has changed from a reserve force of imperialism into an ally, that it has essentially begun to play the role of a striking detachment of imperialist reaction. There is essentially nothing new

in the militaristic theories of the PRC; they are merely a repetition of the worn out dogmas of Western military ideas. Taking an extremely negative position on all issues of disarmament and rejecting all initiatives of the USSR and the other socialist countries in this arena from the start, spurring on the unrestrained arms race, and carrying out undisguised preparations for a third world war, the Beijing hegemonists are playing the role of the striking force of the enemies of disarmament, increasing international tension, and creating a serious threat to the cause of peace.

L. I. Brezhnev, describing the current phase of the ideological struggle concerning the problem of disarmament, stressed: "We cannot fail to see the real facts. The advocates of the arms race use any fabrication, even non-existent ones, so to speak, to heat up the situation and spur on military preparations."<sup>82</sup>

Concealed behind all the varied arguments of the opponents of arms reduction is the obvious desire of the military-industrial complex to avoid losing very profitable business. Those circles in the Western countries which would like to return to a "cold war" atmosphere have an interest in continuation of the arms race, which leads to undermining detente.

At the same time, analysis of the principal bourgeois and Maoist conceptions of the enemies of disarmament shows that the apologists of militarism are unable to present any convincing argument for continuation of the arms race. This is not accidental, for in our day building up military arsenals is fraught with such catastrophic consequences for the entire human race that there is no intelligent alternative to disarmament.

The CPSU consistently and creatively follows a policy of strengthening peace, international detente, and disarmament. As emphasized in the letter of USSR Minister of Foreign Affairs A. A. Gromyko to U. N. General Secretary K. Waldheim concerning the challenges of the second decade of disarmament, the "position of the USSR in principle remains unchanged. The Soviet Union is ready to limit and ban any type of weapons on a mutual basis by agreement with other states. Needless to say, this means without detriment to the security of any country, under conditions of full mutuality among states possessing the corresponding armaments."<sup>83</sup> Our entire experience, and in particular the events of recent times, shows that the only possible way to strengthen peace and international security is to fight consistently and decisively against the enemies of peace, against the aggressive forces of imperialism and the forces of international hegemonism who pit their policy of international domination, intensifying the arms race, and returning to confrontation in the international arena against our policy of detente and disarmament. Leading circles in the United States of America have now adopted this reactionary policy, which has led to complication of the international situation.

But despite the tense international atmosphere that is now taking shape and the construction of obstacles on the path to military detente by the United States and other Western countries, the countries of the socialist community, the movement of nonaligned states, and all world democratic opinion are convinced that sooner or later the problem of disarmament will be resolved. This problem is put on the agenda by history itself and the need to solve it is dictated by the interests of preserving international peace and security and continued human advance along the path of social and scientific-technical progress.

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## AVIATION DEVELOPMENT: GENERAL YAKOVLEV INTERVIEWED

Moscow VOYENNYYE ZNANIYA in Russian No 8, Aug 80 signed to press 9 Jul 80 pp 4-5

[Interview with Engr-Col Gen A.S. Yakovlev, general designer, academician and twice hero of socialist labor: "Speed, Altitude, Range"]

[Text] [Question] Aleksandr Sergeyevich, please tell us about the start of your design activity?

[Answer] Like the majority of Soviet aircraft designers, my path into aviation began back in school making flying model aircraft and participating in building gliders. I still have a "First Organiser of Aircraft Model Clubs" testimonial signed by Semen Mikhaylovich Budenny, the celebrated military leader of the civil war.

In the summer of 1923 the then well-known airman, glider pilot and designer Konstantin Konstantinovich Artseulov sent me as an assistant to Nikolay Dmitrievich Anoshchenko, who was building a glider. For good work I was sent together with the glider to the Crimea for the First All-Union Glider Trials. There, in Koktebel, I made the acquaintance of Sergey Vladimirovich Il'yushin, a student of the Air Force Academy imeni N. Ye. Zhukovskiy, who was testing a glider of his own design. He told me that building a glider and aircraft is impossible without sound knowledge. And one has to start young.

Il'yushin helped me find work in the academy's workshops. After 2 years, in order to be closer to aviation, I transferred to work in the academy's aviation detachment at Moscow's Central Airfield.

Here with the help of S.V. Il'yushin and V.S. Pyshnov I designed the AIR-1 two-seater sporting biplane. The drawings and calculations had taken almost a year of intensive work. Money to purchase the materials was allocated by the Society of Friends of the Air Force (a predecessor of DOSAAF). My work comrades--junior mechanics and engineers from the airfield and also several foremen from the aviation plant--helped build the aircraft. It was taken up for the first time by airman Yulian Piontkovskiy on 12 May 1947. Later the first world records in our country were set by the AIR-1. For the creation of this machine I was admitted to the Air Force Academy imeni N.Ye. Zhukovskiy without having to serve the mandatory command probation period.

While studying in the first course I designed the AIR-2 two-seater biplane and then the "Pionerskaya pravda" AIR-3 two-seater semicantilever parasol monoplane. It was

so named because it had been built with money collected by pioneers. Then the AIR-4--a version of the previous machine--was tested.

In the final course I succeeded in designing the AIR-5 five-seater semicantilever high-wing passenger monoplane with an American engine. But it did not go into series production; we did not have a suitable domestic engine. The next aircraft--the AIR-6--was similar to the previous one, but was based on the less powerful Soviet M-11 engine. This was our first machine in series production. Some 950 AIR-6's in passenger and medical versions were manufactured.

An important stage in the life of our then very small collective was the creation of the AIR-7 highspeed sporting monoplane. Piloted by Yu. I. Piontkovskiy, in the fall of 1932 it reached a speed of 332 kilometers per hour--more than any other Soviet aircraft of that time.

In the same year with the help of the Society for Assisting the USSR's Defense and Aviation-Chemical Construction our collective of enthusiasts acquired official status and came to be called the "Light Aviation Group" and in January 1934 was separated off into an independent design office of the aviation industry.

Within an extremely short time, by May 1935, we had developed the UT-2 two-seater trainer monoplane with the M-11 engine with a capacity of 100 h.p., and in the summer of 1936 we were beginning trials of the UT-1 single-seater monoplane trainer with an M-11E engine with a capacity of 150 h.p. The UT-2 aircraft was used extensively for initial instruction in aero clubs and flying schools. We succeeded in manufacturing more than 7,000 UT-2's in 10 years.

Our collective gained extensive recognition after the creation of the UT-2 and UT-1. The Society for Assisting the USSR's Defense and Aviation-Chemical Construction played an important part here. Back in 1924, when I was an 18-year-old boy, the Society of Friends of the Air Force afforded me the opportunity of building a glider. This organization raised many people who were of use to Soviet aviation. The most insignificant manifestation of capability, energy and persistence was sufficient for the Society of Friends of the Air Force (later the Society for Assisting the USSR's Defense and Aviation-Chemical Construction) to take an interest in a person and afford him the opportunity of working in aviation.

[Question] I would like, Aleksandr Sergeyevich, to hear about the Yaks' participation in the Great Patriotic War.

[Answer] It should be mentioned that the first combat aircraft of our design office was not a fighter. At the end of 1938 we had built, as an initiative, the high-speed twin-engined reconnaissance aircraft No 22. At trials airmen Yu.I. Piontkovskiy reached a speed with it of 567 kilometers per hour--almost 120 kilometers faster than the short-range bomber with the same engines. At the suggestion of the Air Force Command we adapted the aircraft into a short-range bomber. The BB-22 short-range bomber (the Yak-4 as of 1940) went into series production, and about 600 aircraft were manufactured altogether.

We embarked on the creation of our collective's first fighter aircraft at the start of 1939. The I-26 was wheeled out of the assembly shop onto the plant's airfield in January 1940. It should be said that the assignment of developing a fighter was

given to A.I. Mikoyan and G.I. Gurevich, S.A. Lavochkin, P.O. Sukhoy, N.N. Polikarpov and a number of other designers. In working on a new fighter we were trying for the least weight, ease of piloting and extensive use of materials in ready supply.

The fighter, which acquired the designation Yak-1 in series production, with V.Ya. Klimov's VK-105P engine with a capacity of 1,050 h.p. developed a maximum speed of 580 kilometers per hour, had a single 20-mm cannon and two 7.62-mm machineguns. Some 62 Yak-1's were manufactured in 1940 and 8,721 altogether.

Another fighter--the Yak-8--which was chiefly distinguished by the design of the fuselage, was developed shortly thereafter on the basis of the Yak-1. Then came the Yak-9--the Soviet Air Force's most prevalent fighter during the war. The Yak-3--the lightest fighter of its time which developed a speed of up to 660 kilometers per hour and, subsequently, 720 kilometers per hour--appeared at the front at the end of 1943.

Some 36,000 Yak fighters were manufactured altogether in the war years. More than a dozen different modifications were in mass series production. They constituted up to two-thirds of Soviet fighter aircraft.

The modifications of the Yaks differed from one another in speed, armament and range. Thus a 37-mm and, subsequently, a 45-mm cannon was installed on the Yak-9T. Whereas the Yak-1 had a flying range of 850 kilometers, the long-range Yak-9DD had a range of 2,200 kilometers.

Not many people know that the UT-1 and UT-2 aircraft, which were used as nighttime light bombers, also made their contribution to the victory. They carried one-two machineguns and bomb racks for the suspension of 100-200 kilogram bombs. Thus the UT-16 squadron took part in the defense of Sevastopol' in May 1942.

[Question] Tell us, please, about the work of the design collective which you head since the war.

[Answer] The question of the creation of Soviet jet fighters had become very acute back at the end of the Great Patriotic War. A number of collectives, including ours, was involved in developing them. On 24 April 1946 airmen M.I. Ivanov took up for the first time the Yak-15 jet fighter, which had been created on the basis of the series-produced piston-engined Yak-3. Our Yak-15 was the first jet fighter accepted as part of our weaponry. Trials of the Yak-17 jet fighter and, subsequently, the Yak-23 began shortly thereafter. Many Soviet airmen flew the Yak-25 two-seater interceptor with two turbojet engines and tandem landing gear. The subsequent development of its design enabled us to create the first domestic series-produced supersonic aircraft--the Yak-28.

The Yak-11 trainer and the Yak-12 low-powered aircraft, designed to carry three passengers, underwent flight tests almost simultaneously with the Yak-15 jet fighter.

In 1946 our design office created the Yak-18 two-seater training-sporting aircraft to replace the UT-2. As distinct from its predecessor, it had retractable landing gear, a covered cockpit and a transceiving radio set. The Yak-18 became the main training aircraft in the DOSAAF aero clubs and the aviation schools of the Air Force and civil aviation.

Then the Yak-18U with the nose landing gear strut--like the majority of combat and transport aircraft of that time--appeared. The Yak-18A--with a more powerful engine and navigational equipment for long-distance and night flights--was manufactured in the latter half of the 1950's. This aircraft served as the basis for the development of the Yak-18P special single-seater sporting-piloting aircraft, in which Soviet sportmen performed successfully at the second and third World Aerobatic Championships in Hungary (1962) and Spain (1964). A new modification--the Yak-18PM--scored a major success at the fourth world championships in Moscow (1966). With this aircraft Soviet pilots won nine gold medals, and DOSAAF sportmen V. Martem'yanov and G. Korchuganov became absolute world champions.

The Soviet sportmen I. Yegorov and S. Savitskaya earned the title of world champions on the lightened Yak-18PS aircraft at the sixth championships in Britain (1970). At the eighth championships in Kiev (1976) Soviet pilots performed in the new Yak-50 aircraft, winning nine gold medals. Altogether 27 world championship gold medals and 7 absolute world champion gold medals have been won at the world championships in the sporting aircraft developed by our collective.

We developed the Yak-18T aircraft for instruction in civil aviation schools. The seats of the student and the instructor in it are alongside, as in all Aeroflot aircraft. In its transport version the aircraft can carry three passengers. The two-seater Yak-52 for initial instruction was created in 1974 on the basis of the single-seater Yak-50 piloting aircraft.

[Question] I would like to hear about the aviation records set by Soviet pilots in Yak aircraft.

[Answer] The first world record (which at the time was unofficial since the USSR only joined the International Flying Sport Federation in 1935) was set by Yu. I. Piontovskiy, who on 19 July 1927 in an AIR-1 covered a distance of 1,420 kilometers in 15 hours 30 minutes. Then on 6 September 1929 distance and speed records were set by A.I. Filin and A.F. Koval'kov in an AIR-3 on a flight from Mineral'nyye Vody to Moscow--1,750 kilometers at an average speed of 170 kilometers per hour.

The first official record was set by Ya.V. Pis'mennyy and V.P. Kuznetsov on an AIR-6 float plane, flying a distance of 568 kilometers on 19 October 1936. They improved their record the following year, flying 1,297 kilometers nonstop. Then the women pilots I.N. Vishnevskaya and Ye.M. Mednikova achieved a record altitude of 6,518 meters on 4 July 1937 in an AIR-9bis. In October of the same year V.S. Grizodubova and M.M. Raskova made a record-setting Moscow-Aktyubinsk flight--1,444 kilometers--in an AIR-12. In 1937-1938 Soviet men and women pilots set a series of international records in the UT-1 and UT-2 float planes.

After the Great Patriotic War, at the end of the 1940's and the start of the 1950's, a number of records was set in the series-produced Yak-11 and Yak-18 trainers. In July 1959 the pilot V.P. Smirnov in a radio altimeter aircraft with two turbojet engines with a cargo of 1 ton reached an altitude of 20,456 meters, and a cargo of 2 tons was taken up 20,174 meters. The woman pilot M.L. Popovich set a world record in this same plane on 11 August 1965, flying 2,000 kilometers on a loop route at an average speed of 735 kilometers per hour, and a little later, on 18 September 1967, she flew 2,497 kilometers on a loop route, thereby setting a new record.

A number of world speed records was set in the 1960's by the pilots V.G. Mukhin, V.P. Smirnov, G.G. Korchuganov and R.M. Shikhina in the Yak-30 and Yak-32 jet sport-trainer aircraft. A further entry in the column of world records for light piston-engined aircraft was made on 26 July 1977, when O.A. Bulygin developed a speed of 319 kilometers per hour in a Yak-50. Altogether aircraft developed by our collective have set about 50 world records.

[Question] Aleksandr Sergeyevich, which of the numerous Yaks is your favorite?

[Answer] It is difficult to answer this question. After all, no mother divides her children into favorite and unfavorite. I will never forget the first AIR-1.

Of the aircraft of the war years, the Yak-3--the lightest and most maneuverable fighter of World War II--is particularly dear to me. We were all proud to learn of the order of Hitler's command: "On encountering the 'Yakovlev' fighter without an oil cooler in the front and with a sloping antenna mast, do not engage." It was with good reason that of all the Soviet, British and American fighters, the French pilots of the "Normandie-Nieman" Regiment chose the Yak-3.

To speak of jet aircraft, our collective invested much labor in the creation of the VTOL aircraft since many new fundamental questions had to be solved. It must be said that creating an aircraft combining the takeoff and landing potential of a helicopter with the speed of a jet fighter was an exceptionally complex task. Such an aircraft was demonstrated at the air show in honor of the 50th anniversary of the Great October by Test Pilot V.G. Mukhin.

[Question] May we know about new passenger aircraft being developed by the design office collective?

[Answer] The Yak-40 aircraft with three jet engines for local lines has been operating successfully on Aeroflot routes for 12 years now. In this time the number of seats in the passenger section has increased from 24 to 32, and the range from 600 to 1,500 kilometers. One of the Yak-40's virtues is that it requires runways of only 360 meters for takeoff and landing. The aircraft has been bought by a number of foreign air lines for operating in Italy, the FRG, Czechoslovakia, Yugoslavia and other countries. Some 1,000 Yak-40's have been built altogether.

In recent years our collective has devoted much effort to the creation, testing and improvement of the Yak-42 for the short-range main and local air routes, which was mentioned in the "Main Directions of the Development of the USSR Economy in 1976-1980" confirmed by the 25th CPSU Congress. The Yak-42 has three powerful and economical two-circuit turbojet engines making it possible to carry 120 passengers at a cruising speed of more than 800 kilometers per hour. We hope that the Yak-42 will shortly be in service on Aeroflot routes.

[Question] How do you think aviation will develop in the near future?

[Answer] Much has been said and written about the fight for speed, altitude and range. Solution of these problems is an interesting and sufficiently complex task for the designer. However, the achievements of modern science and technology make it possible in principle, with certain difficulties, maybe, to solve them within the limits of the practical requirements of military and civil aviation.

Questions of economy are of great significance for the development of aviation under modern conditions. Thus the most important indicator of the economical nature of civil aircraft is fuel expenditure per passenger-kilometer. It has been more than halved in the past quarter century. Whereas the Tu-104 used approximately 80 grams and the Tu-134A 55 grams, the Yak-42 uses only 32 grams. Research in the field of gas dynamics, automation and study of materials and new types of fuel are being developed to reduce fuel consumption. Another direction is an improvement in the aircraft's load ratio (the relation of its overall weight to its useful load). Weight perfection is graphically evaluated by the bulk of the structure of the aircraft per passenger. Thus in the Tu-104 this is 425 kilograms, the Tu-134A 375 kilograms and the Yak-42 only 250 kilograms. The main paths of an increase in the load ratio are an improvement in computation methods, rational designing and the use of new types of material. A reduction in the length of required runways is directly related to air transport economies. For example, whereas for the Tu-134A one of 2,500 meters is needed, one of only 1,800 is needed for our Yak-42.

We have done a great deal. But still more has to be done for a further improvement in domestic civil and combat aircraft in the name of a strengthening of the defense and economic might of our socialist motherland. The workers of our and other design offices are working particularly intensively in the final year of the 5-year plan. Like the entire Soviet people, we are endeavoring to worthily greet the 26th CPSU Congress and commemorate the forum of Soviet communists with new achievements.

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## BASIC MILITARY TRAINING: TASKS AND PROBLEMS

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[Article by A. Averin, chief of the USSR Ministry of Education Basic Military Training Department: "A Most Important Task for the Teachers"]

[Text] Preparing the student youth to perform its constitutional duty with respect to defense of the motherland is a truly state task of the Soviet general educational school. We must not forget that shortly after leaving school many young men are called up for real military service or become officer cadets at military-training institutions. For this reason the main goal of basic military training is to provide the future soldiers with the necessary knowledge and skills in order that they may in the armed forces quickly master modern weapons and combat equipment.

A detachment of military instructors many thousands strong entered the educational institutions with the introduction of basic military training. They are predominantly reserve officers, and there are many participants in the Great Patriotic War. More than 80 percent are CPSU and Komsomol members, and one-half has higher military or pedagogical education.

The military instructors are, as a rule, ideologically conditioned people with varied knowledge and great experience of combat and life. With their arrival there was a marked rise in the quality and an increase in the purposefulness and effectiveness of the military-patriotic education of the students and an improvement in the activity of the DOSAAF primary organizations. The absolute majority of the military instructors enjoys authority among the instructors and schoolchildren.

Reserve officer N. Kapichin, communist and veteran of the Great Patriotic War, has been working as the military instructor at Minsk's High School No 84 for more than 10 years now. He served in the ranks of the Soviet Army for almost a third of a century and has higher military and pedagogical education. He is distinguished by a high sense of responsibility for his entrusted assignment, thorough preparation for each lesson and skillful combination of practical instruction with education. It is not fortuitous that in the last 5 years alone of the 1976 young men who have graduated from High School No 84 exactly one-half has entered military-training institutions, while many have already become officers.

The military instructors V. Makushev (Kuybyshev's High School No 54), Hero of the Soviet Union V. Mironov (Saransk's High School No 20), A. Kuznetsov (Vil'nyus's High School No 40), A. Novosel'tsev (Vitebsk's High School No 27), N. Pokhodyayev

(the Vetrushskaya High School of Gor'kovskaya Oblast) and many, many others are also working well.

Thanks to such military instructors, almost all the seniors approach a study of the fundamentals of warfare and methods of protection against methods of mass destruction with interest, and, moreover, as experience shows, the 5-day field drills at the patron military units or military-sports camps are specially popular among the boys. Here, under conditions very close to army conditions, the young men acquire the moral, psychological and physical conditioning essential for real service. The military instructors' opinion is unanimous: in their results the field drills are the equivalent of months spent in a military study room or class. The pupils remember these 5 days. Thus a questionnaire was distributed among school graduates of Arzamas to whose question "Which measures made the strongest impression on you in the years of instruction?" the overwhelming majority of the young men answered: "The field drills in basic military training and sentry duty at the memorial of combat glory."

The armed forces receive an increasingly well prepared reinforcement with every succeeding year. But at the same time it cannot be said, unfortunately, that there is a felicitous state of affairs in the organization and realization of the training process in basic military training in all educational institutions. Checks show that the ideological and methodological level of the lessons is low because of the inadequate professional training and negligible teaching experience of a number of military instructors. They do not know the training material in depth, fail to observe elementary requirements of didactics and make irrational use of training time. Some 20-25 minutes is sometimes spent on questioning one-two pupils while the remainder of the students remains totally passive. As a result only 12-15 minutes remains for the explanation of new material, and, furthermore, everything boils down to a paraphrasing of certain sections of the handbook or the dictation of appropriate articles of the military manual and regulations. These inadequacies must be completely eradicated in the new academic year.

Active methods of practical instruction are not being effectively employed in the lessons at all schools. Practical skills and an ability to independently assimilate knowledge are not being inculcated in the seniors in some places. There are instances of a military study room having visual aids and technical instructional facilities, but of use being made of them only rarely and, at times, maladroitly. There are known instances of the overstatement of students' basic military training marks, which does tremendous harm to the cause of preparing the youth for military service, not to mention the moral damage.

Basic military training is not yet being conducted in Russian in certain national schools, particularly in the Central Asian and Trans-Caucasian republics. The training methods recommendations with respect to this important issue are not being completely fulfilled.

Military instructors who are reserve sergeants and privates lacking the necessary military and teaching knowledge work in the schools of a number of republics and oblasts. They approach their work conscientiously, but their inadequate professional training is involuntarily reflected in the level of basic military training. It is necessary in this connection in the new academic year to disseminate in every possible way the experience of the public education authorities of Voronezhskaya and

Gor'kovskaya oblasts, the Tatarskaya ASSR and the Georgian SSR, which are concerned to insure that the military instructors study in the correspondence faculties of the teacher-training institutes. In many places the public education authorities, in conjunction with the military commissariats, send the young sergeant-military instructors to special courses, after which the rank of officer of the reserve is conferred on them.

The teacher advanced-training institutes and military instructor methods associations play a great part in increasing the quality of the teaching of basic military training. I believe it would be advisable to enlist more extensively in the classes for increasing one's qualifications instructors of the military schools and military departments of civil VUZ's and civil defense staff workers. The public education authorities should, in conjunction with the military commissariats, pay more attention to studying and collating the progressive experience of the best military instructors and conveying it to the comrades who are just starting out.

Difficulties are encountered in the creation of a modern supply of training equipment for basic military training. In some schools the military study rooms are fitted out primitively, in an outdated manner. They lack technical instructional facilities and visual training aids. As before, insufficient school small-bore ranges are being built in the Azerbaijan, Tajik, Kirgiz and Armenian SSR's and certain oblasts of the RSFSR. New school buildings are sometimes erected in accordance with old plans without regard for basic military training requirements and they fail to provide for a military study room, an armory, a small-bore range and training grounds. There is a shortage of authorized training weapons and instruments. The training weapon issued to schools frequently lacks the authorized accessories, which makes correct instruction difficult.

It is far from always that the enumerated shortcomings are connected with objective difficulties. Much sometimes depends on the energy of the military instructor. In one and the same rayon or city schools may be encountered which have absolutely identical conditions but a different supply of training equipment. In some the military instructors, with the support of the directors and voluntary public organizations, display creative initiative in the equipment of military study rooms, the creation of aids and the building of small-bore ranges, taking advantage here of the assistance of the patrons and relying on the seniors. But we also have military instructors who expect that everything they need will be sent them by the public education authorities, stores and so forth.

Interdisciplinary links represent sizable potential for an improvement in basic military training. This is confirmed by the experience of many teaching collectives, particularly of the majority of schools of Leningrad, Rostov-na-Donu's High School No 1, Baltiysk's High School No 7, Kakhovka's High School No 1 and Ashkhabad's High School No 12. History, social science and literature lessons arm the schoolchildren with a knowledge of the laws of social development, mold a communist philosophy of life and a class approach to social phenomena and inculcate a hatred of the enemies of our motherland and unshakable confidence in the inevitability of the victory of communism. The students assimilate the basic propositions of Marxist-Leninist teaching on war and the army and V.I. Lenin's teaching on defense of the socialist fatherland, learn of the heroic revolutionary, combat and labor traditions of the Soviet people and their armed forces and are convinced of the need for the CPSU's directing role in the strengthening of the country's defense.

In math, physics, chemistry and biology classes the students obtain the fundamentals of knowledge without which today military equipment and weapons and methods of protection against weapons of mass destruction cannot be mastered. The role of the physical training drills for student youth preparing for military service and passing standards of the "Ready for Labor and Defense of the USSR" complex is particularly great. Unified methods commissions for physical training and basic military training have been created in a number of schools in this connection. On these the physical education instructors work in close contact with the military instructors and strive for impressive results in paramilitary types of sport.

In organizing work on military-patriotic education it must be remembered that modern youth is characterized by a high level of education and information and diversity of interests and that a substantial proportion of young men goes into the army directly from school without having been tempered in production collectives. Therefore they must learn right there in school that military service entails great intensity and requires of a person varied knowledge, strong physical and moral conditioning, courage, quick thinking, strength of character and strict discipline.

Work on preparations for the new academic year is currently drawing to an end in the country's schools. The traditional conferences of schoolteachers, including military instructors, are approaching.

It is the task of the public education authorities, primarily the basic military training inspectors and methods specialists, to prepare the August military instructor conferences thoroughly and conduct them at the proper ideological-theoretical and organizational-procedural level. It is advisable to invite to the conferences representatives of local military commissariats, civil defense staffs and DOSAAF committeees. It is necessary at them to analyze in depth the results of the past year, discuss progressive work experience and chart the paths for a further improvement in the basic military training and military-patriotic education of the students. All teachers, under the leadership of the directors, must be concerned to insure that questions of the students' military-patriotic education always be at the center of the attention of the teacher councils and be reflected in the plans of the teaching and educational work of the class leaders and special-subject methods associations.

The comprehensive preparation of the younger generation for the reliable defense of the socialist fatherland and of young men specifically for military service in the armed forces is a most important task of the teaching collectives, and it must be accomplished in the best way possible.

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